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(54) Title: CHEMICAL PROCESS

$$H_2N$$
 N
 (I)

$$O_2N$$
 (II)

$$\mathbb{R}^2 = \mathbb{N} = \mathbb{N}$$

$$R^2 - \stackrel{H}{\stackrel{N}{\longrightarrow}} \stackrel{X}{\stackrel{N}{\longrightarrow}}$$
 (IV)

(57) Abstract: The present invention provides a process for the preparation of a compound of formula (I); wherein X is halogen; Y is $\mathbb{Z}R^1$; Z is oxygen or sulphur; and \mathbb{R}^1 is C $_{1\text{-}6}$ alkyl, $\mathbb{C}_{1\text{-}6}$ haloalkyl or $\mathbb{C}_{3\text{-}7}$ cloalkyl; the process comprising either: hydrogenating a compound of formula (II); with a suitable transition metal catalyst in a $\mathbb{C}_{1\text{-}6}$ aliphatic alcohol, an ether, an hydrocarbon as solvent; or, b) conducting a one-pot hydrogenation of a compound of formula (III): wherein \mathbb{R}^2 is phenyl optionally substituted by chloro, $\mathbb{C}_{1\text{-}6}$ alkyl, $\mathbb{C}_{1\text{-}6}$ alkoxy or $(\mathbb{C}_{1\text{-}6}$ alkyl)₂N; firstly at about 20°C to form a compound of formula (IV): and then at about 40°C; both steps (I) and (ii) being carried out in the presence of a suitable catalyst and in the presence of a suitable solvent.



WO 2005/095358 A2

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